

### WHAT IS CLAIMED

- 1 1. An air cleaning device comprising:
  - 2 a housing with a top and a base;
  - 3 at least one emitter electrode disposed within said housing;
  - 4 at least one collector electrode disposed within said housing;
  - 5 at least one pylon to secure each emitter electrode with the base of the housing;
  - 6 a barrier wall adjacent to the base of the housing and located between the emitter electrode and
  - 7 the collector electrode; and
  - 8 a light source located within the housing that provides germicidal activity.
- 1 2. The air cleaning device in claim 1 wherein the barrier wall has a lip.
- 1 3. The air cleaning device in claim 1 wherein the pylons include insulation material selected from
  - 2 the group consisting of glass, ceramics, and ceramic-based composites.
- 1 4. The air cleaning device in claim 1 wherein the pylons are formed from insulation material
  - 2 selected from the group consisting of glass, ceramics, and ceramic-based composites.
- 1 5. The air cleaning device in claim 2 wherein the lip of the barrier wall is coated with insulation
  - 2 material selected from the group consisting of glass, ceramics, and ceramic-based composites.

- 1 6. The air cleaning device in claim 2 wherein the lip of the barrier wall is formed from insulation  
2 material selected from the group consisting of glass, ceramics, and ceramic-based composites.
- 1 7. The air cleaning device in claim 1 wherein the barrier wall is coated with insulation material  
2 selected from the group consisting of glass, ceramics, and ceramic-based composites.
- 1 8. The air cleaning device in claim 1 wherein the barrier wall is formed from insulation material  
2 selected from the group consisting of glass, ceramics, and ceramic-based composites.
- 1 9. The air cleaner of claim 2 wherein the pylons and the lip of the barrier wall are coated with an  
2 insulating material selected from the group consisting of glass, ceramics, and ceramic-based  
3 composites.
- 1 10. The air cleaner of claim 2 wherein the pylons and the lip of the barrier wall are formed from an  
2 insulating material selected from the group consisting of glass, ceramics, and ceramic-based  
3 composites.
- 1 11. The air cleaner of claim 1 wherein the pylons and the barrier wall are coated with an insulating  
2 material selected from the group consisting of glass, ceramics, and ceramic-based composites.

1 12. The air cleaner of claim 1 wherein the pylons and the barrier wall are formed from an insulating  
2 material selected from the group consisting of glass, ceramics, and ceramic-based composites.

1 13. The air cleaner of claim 2 wherein the pylons, the barrier wall, and the lip of the barrier wall are  
2 coated with an insulating material selected from the group consisting of glass, ceramics, and ceramic-  
3 based composites.

1 14. The air cleaner of claim 2 wherein the pylons, the barrier wall, and the lip of the barrier wall are  
2 formed from an insulating material selected from the group consisting of glass, ceramics, and ceramic-  
3 based composites.

1 15. An air cleaning device comprising:  
2 a housing with a top and base;  
3 at least one emitter electrode disposed in the housing;  
4 at least one pylon disposed in the base of the housing, to secure the emitter electrode;  
5 at least one collector electrode removably disposed in the housing in order to be cleaned;  
6 a source of high voltage coupled between the emitter electrode and the collector electrode;  
7 a barrier wall situated between the emitter electrode secured in the pylon, and the collector  
8 electrode, to avoid high voltage arcing;

9 a lip on an upper edge of the barrier wall;  
10 an object with a bore therethrough, through which bore the emitter electrode is provided such  
11 that the object can travel along and clean the emitter electrode;  
12 an object-lifting arm movably attached to the collector electrode and operably engageable with  
13 the object to move and raise the object along the emitter electrode as the collector electrode is  
14 removed through the top of the housing to be cleaned; and  
15 a germicidal light source.

1 16. The air cleaning device in claim 15 wherein the pylon is coated with insulation material selected  
2 from the group consisting of glass, ceramics, and ceramic-based composites.

1 17. The air cleaning device in claim 15 wherein the pylon is cast from insulation material selected  
2 from the group consisting of glass, ceramics, and ceramic-based composites.

1 18. The air cleaning device in claim 15 wherein the barrier wall is coated with insulation material  
2 selected from the group consisting of glass, ceramics, and ceramic-based composites.

1 19. The air cleaning device in claim 15 wherein the barrier wall is formed from insulation material  
2 selected from the group consisting of glass, ceramics, and ceramic-based composites.

1 20. The air cleaner of claim 15 wherein the pylons and the barrier wall are coated with an insulating  
2 material selected from the group consisting of glass, ceramics, and ceramic-based composites.

1 21. The air cleaner of claim 15 wherein the pylons and the barrier wall are formed from an  
2 insulating material selected from the group consisting of glass, ceramics, and ceramic-based  
3 composites.

1 22. The device of claim 2 wherein at least one of the pylons, the barrier wall and the lip of the  
2 barrier wall are comprised of an insulating material.

1 23. The device of claim 2 wherein at least one of the pylon, the barrier wall and the lip of the barrier  
2 wall are coated with an insulating material.

1 24. The device of claim 2 wherein said pylon and the lip of the barrier wall are comprised of an  
2 insulating material.

1 25. The device of claim 2 wherein said pylon and the upper lip of the barrier wall are coated with  
2 an insulating material.

1 26. The device of claim 1 wherein said pylon and the barrier wall are comprised of an insulating  
2 material.

1 27. The device of claim 1 wherein said pylon and the barrier wall are coated with an insulating  
2 material.

1 28. The device of claim 15 wherein at least one of the pylon and the barrier wall are comprised an  
2 insulating material.

1 29. The device of claim 15 wherein at least one of the pylon and the barrier wall are coated with an  
2 insulating material.

1 30. The device of claim 15 wherein said pylon and the barrier wall are comprised of an insulating  
2 material.

1 31. The device of claim 15 wherein said pylon and the barrier wall are coated with an insulating  
2 material.